

What is claimed is:

1. A personal internet telephony apparatus comprising:
a network interface, couplable to a communication network, for
5 sending and receiving internet telephony signals over the communication
network;
a telephone interface, couplable to a telephone device, for sending
telephone control signals to the telephone device and receiving telephone
control signals from the telephone device; and
10 a controller operably coupled between the network interface and the
telephone interface, the controller implementing a personal internet telephony
feature server for directing telephone calls, intended for the telephone device,
received as internet telephony signals over the network interface and
managing telephone services on behalf of the telephone device based on the
15 telephone control signals received from the telephone device over the
telephone interface.
2. A personal internet telephony apparatus according to claim 1, wherein
the controller is configurable to ring the telephone device over the telephone
20 interface upon receiving a telephone call over the network interface.
3. A personal internet telephony apparatus according to claim 2, wherein
the controller is configurable to ring at least one other telephone device over
the network interface simultaneously with ringing the telephone device over
25 the telephone interface.
4. A personal internet telephony apparatus according to claim 2, wherein
the controller is configurable to ring at least one other telephone device over
the network interface if the telephone device is not answered within a
30 predetermined time.

5. A personal internet telephony apparatus according to claim 1, wherein the controller is configurable to forward a telephone call to another telephone device over the network interface in lieu of ringing the telephone device over the telephone network upon receiving a telephone call over the network interface.
6. A personal internet telephony apparatus according to claim 1, wherein the controller is configurable to generate a call waiting signal to the telephone device over the telephone interface upon receiving a telephone call over the network interface.
7. A personal internet telephony apparatus according to claim 1, wherein the controller is configurable to interrupt an existing telephone call to the telephone device with a new telephone call received over the network interface.
8. A personal internet telephony apparatus according to claim 1, wherein the controller is configurable to permit one-way communication from a new telephone call received over the network interface to the telephone device over the telephone network.
9. A personal internet telephony apparatus according to claim 1, wherein the controller is configurable to direct telephone calls based on time of day.
10. A personal internet telephony apparatus according to claim 1, wherein the feature server includes a web-based management interface accessible through the network interface.
11. A personal internet telephony apparatus comprising:
a network interface, couplable to a communication network, for sending and receiving internet telephony signals over the communication network;

a telephone interface, couplable to a telephone device, for sending telephone control signals to the telephone device and receiving telephone control signals from the telephone device;

means for directing telephone calls, intended for the telephone device,
5 received as internet telephony signals over the network interface; and

means for managing telephone services on behalf of the telephone device based on the telephone control signals received from the telephone device over the telephone interface.

10 12. A personal internet telephony apparatus according to claim 11, wherein the means for directing telephone calls comprises:

means for ringing ring the telephone device over the telephone interface upon receiving a telephone call over the network interface.

15 13. A personal internet telephony apparatus according to claim 12, wherein the means for directing telephone calls comprises:

means for ringing at least one other telephone device over the network interface simultaneously with ringing the telephone device over the telephone interface.

20

14. A personal internet telephony apparatus according to claim 12, wherein the means for directing telephone calls comprises:

means for ringing at least one other telephone device over the network interface if the telephone device is not answered within a predetermined time.

25

15. A personal internet telephony apparatus according to claim 11, wherein the means for directing telephone calls comprises:

means for forwarding a telephone call to another telephone device over the network interface in lieu of ringing the telephone device over the
30 telephone network upon receiving a telephone call over the network interface.

16. A personal internet telephony apparatus according to claim 11,
wherein the means for directing telephone calls comprises:

means for generating a call waiting signal to the telephone device over
the telephone interface upon receiving a telephone call over the network
5 interface.

17. A personal internet telephony apparatus according to claim 11,
wherein the means for directing telephone calls comprises:

means for interrupting an existing telephone call to the telephone
10 device with a new telephone call received over the network interface.

18. A personal internet telephony apparatus according to claim 11,
wherein the means for directing telephone calls comprises:

means for permitting one-way communication from a new telephone
15 call received over the network interface to the telephone device over the
telephone network.

19. A personal internet telephony apparatus according to claim 11,
wherein the means for directing telephone calls comprises:

20 means for directing telephone calls based on time of day.

20. A personal internet telephony apparatus according to claim 11, further
comprising:

a web-based management interface accessible through the network
25 interface.

21. A hierarchical internet telephony system comprising:

a higher tier internet telephony feature server coupled to a
communication network, the multiple user internet telephony feature server
30 directing telephone calls for a plurality of users; and

a plurality of lower tier internet telephony feature servers in
communication with the higher tier internet telephone feature server over the

communication network, each lower tier internet telephony feature server directing telephone calls for an individual user, wherein the higher tier internet telephony feature server is configurable to direct telephone calls to the lower tier internet telephony feature servers, and wherein each lower tier
5 internet telephony feature server is separately configurable to direct telephone calls forwarded to it by the higher tier internet telephony feature server.

22. A hierarchical internet telephony system according to claim 21,
10 wherein each lower tier internet telephony feature server is configured by its respective user to operate with the higher tier internet telephony feature server, and wherein the higher tier internet telephony feature server is configured to either reject telephone calls for a particular lower tier internet telephony feature server or accept and forward telephone calls for the lower
15 tier internet telephony feature server.